

Figure 1A
Neutrokin- α

1 AAATTCAGGATAACTCTCTGAGGGGTGAGCCAAGCCCTGCCATGTAGTGCACGCAGGAC 60

61 ATCAACAAACACAGATAACAGGAAATGATCCATTCCCTGTGGTCACTTATTCTAAAGGCC 120

121 CCAACCTTCAAAGTTCAAGTAGTGATATGGATGACTCCACAGAAAGGGAGCAGTCACGCC 180
1 M D D S T E R E Q S R L 12

181 TTACTTCTTGCCCTTAAGAAAAGAGAAGAAATGAACTGAAGGAGTGTGTTTCCATCCTCC 240
13 T S C L K K R E E M K L K E C V S I L P 32
CD-I

241 CACGGAAGGAAAGCCCTCTGTCCGATCCTCCAAAGACGGAAGCTGCTGGCTGCAACCT 300
33 R K E S P S V R S S K D G K L L A A T L 52
CD-I

301 TGCTGCTGGCACTGTGTCTTGCTGCCTCACGGTGGTGTCTTTCTACCAGGTGGCCGCC 360
53 L L A L L S C C L T V V S F Y Q V A A L 72

361 TGCAAGGGGACCTGGCCAGCCTCCGGGCAGAGCTGCAGGGCCACCACGCGGAGAAGCTGC 420
73 Q G D L A S L R A E L Q G H H A E K L P 92
CD-II

421 CAGCAGGAGCAGGAGCCCCAAGGCCGGCCTGGAGGAAGCTCCAGCTGTACCGCGGGAC 480
93 A G A G A P K A G L E E A P A V T A G L 112
CD-III

#

481 TGAAAATCTTTGAACCACCAGCTCCAGGAGAAGGCAACTCCAGTCAGAACAGCAGAAATA 540
113 K I F E P P A P G E G N S S Q N S R N K 132

541 AGCGTGCCGTTTCAGGGTCCAGAAGAAACAGTCACTCAAGACTGCTTGCAACTGATTGCAG 600
133 R A V Q G P E E T V T Q D C L Q L I A D 152
CD-IV

601 ACAGTGAAACACCAACTATACAAAAAGGATCTTACACATTTGTTCCATGGCTTCTCAGCT 660
153 S E T P T I Q K G S Y T F V P W L L S F 172
CD-V

661 TTAAAAGGGGAAGTGCCCTAGAAGAAAAAGAGAATAAAATATTGGTCAAAGAAACTGGTT 720
173 K R G S A L E E K E N K I L V K E T G Y 192
CD-V CD-VI

721 ACTTTTATATATATGGTCAGGTTTATATACTGATAAGACCTACGCCATGGGACATCTAA 780
193 F F I Y G O V L Y T D K T Y A M G H L I 212
CD-VI CD-VII

781 TTCAGAGGAAGAAGGTCCATGTCTTTGGGGATGAATTGAGTCTGGTGACTTTGTTTCGAT 840
213 O R K K V H V F G D E L S L V T L F R C 232
CD-VII CD-VIII

#

841 GTATTCAAATATGCCTGAAACACTACCAATAATTCCTGCTATTTCAGCTGGCATTGCAA 900
233 I O N M P E T L P N N S C Y S A G I A K 252
CD-VIII CD-IX

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Figure 1B
Neutrokine-α

901 AACTGGAAGAAGGAGATGAAGTCCAAGTCAATACCAAGAGAAAATGCACAAATATCAC 960
253 L E E G D E L O L A I P R E N A Q I S L 272
CD-X

961 TGGATGGAGATGTCACATTTTTGGTGCATTGAAACTGCTGTGACCTACTTACACCATGT 1020
273 D G D V T F E G A L K L L 285
CD-XI

1021 CTGTAGCTATTTTCCTCCCTTTCTCTGTACCTCTAAGAAGAAAGAAATCTAACTGAAAATA 1080

1081 CCAAAAAAAAAAAAAAAAAAAAA 1100

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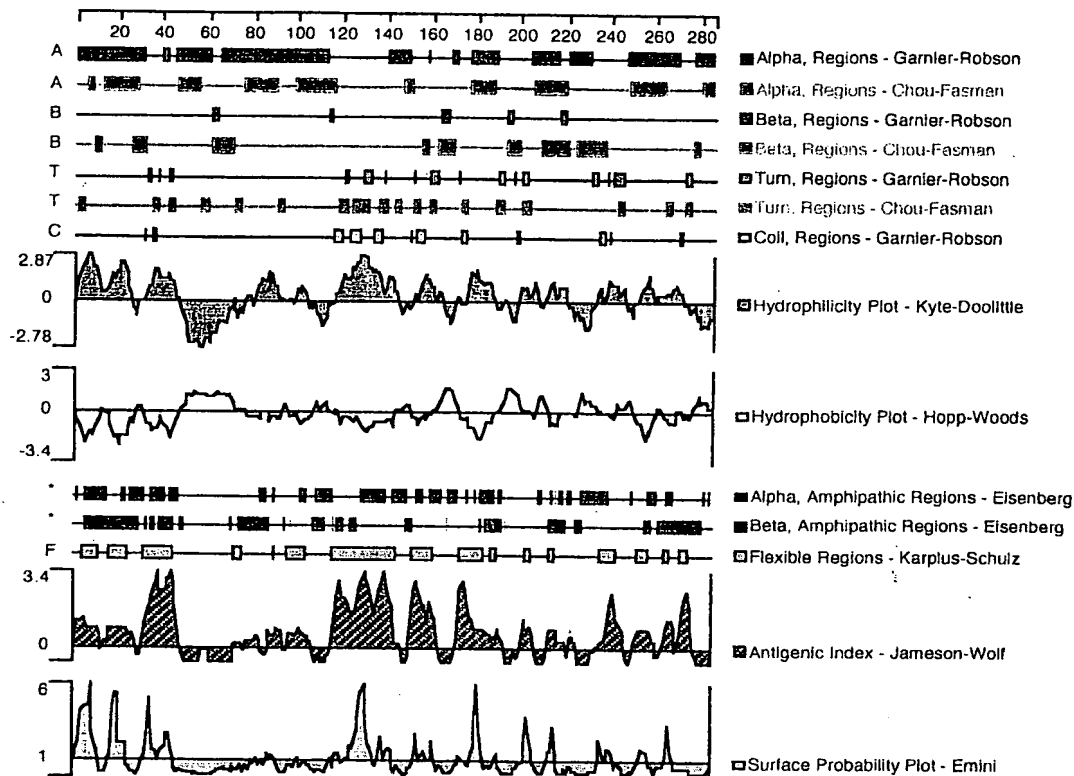
FIGURE 2A

	10	20	30	
1	M S T E S M I R D V E L	- - - - -	- - - - - A E E A	TNFalpha
1	M - - - - -	- - - - -	- - - - - T P P E R L	TNFbeta
1	M G A - - - - -	- - - - -	- - - - -	Ltbeta
1	M Q Q P F N Y P Y P Q I Y W - V D S S A S S P W A P P G T V			FasLigand
1	M D D S T E R E Q S R L T S C L K K R E E M K L K E C V S I			Neutrokin alpha
1	M D D S T E R E Q S R L T S C L K K R E E M K L K E C V S I			Neutrokin alphaSV
	40	50	60	
17	L P K K T G G P Q - - G S R R - - - - -			TNFalpha
8	F - - - - -	- - - - -	- - - - -	TNFbeta
4	- - - - - L G L E G R G G - - - - -			Ltbeta
30	L P C P T S V P R R P G Q R R P P P P P P P P L P P P P P			FasLigand
31	L P R K E S P S V R S S K D - - G K L L A A T L L L A L L			Neutrokin alpha
31	L P R K E S P S V R S S K D - - G K L L A A T L L L A L L			Neutrokin alphaSV
	70	80	90	
30	- - - - -	- - - - - C L F L S L F S		TNFalpha
9	- - - - - L P R V R G T T L H L L L L G L L L V I L P			TNFbeta
12	- - - - - - R L Q G R G S L L L A V A G A T S L V T			Ltbeta
60	P P P L P P L P L P L P P L K K R G N H S T G L C L L V M F F M			FasLigand
58	S C C L T V V S F Y Q V A A L Q G D L A S L R A E L Q Q G H H			Neutrokin alpha
58	S C C L T V V S F Y Q V A A L Q G D L A S L R A E L Q Q G H H			Neutrokin alphaSV
	100	110	120	
38	F L - - I V A G A T T L F C L L H F G V I G P Q R E E F P R			TNFalpha
31	G A Q G L P G V G L - - - - -	- - - - -	- - - - -	TNFbeta
32	L L L A V P I T V L A V L A L V P Q D Q G G L V T E T A D P			Ltbeta
90	V L V A L V G L G L G M F Q L F H L Q K E L A E L R E S T S			FasLigand
88	A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P			Neutrokin alpha
88	A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P			Neutrokin alphaSV
	130	140	150	
66	D L S L I S - P L A - Q A V R S S S R T P S D - - K P V A			TNFalpha
41	- - - T P S - A A Q - T A R Q H P K M H L A H S T L K P A A			TNFbeta
62	G A Q A Q Q - G L G F Q K L P E E E P E T D L S P G L P A A			Ltbeta
120	Q M H T A S - S L E - K Q I G H P S P P P E K K E L R K V A			FasLigand
118	P A P G E G N S S Q N S R N K R A V Q G P E E T V T Q D C L			Neutrokin alpha
118	P A P G E G N S S Q N S R N K R A V Q G P E E T - - - - -			Neutrokin alphaSV
	160	170	180	
91	H V V A N P Q A E G - Q - - - - - L Q W L N R R A N A L L			TNFalpha
66	H L I G D P S K Q N - S - - - - - L L W R A N T D R A F L			TNFbeta
91	H L I G A P L K - G Q G - - - - - L G W E T T K E Q A F L			Ltbeta
148	H L T G K S N S R S M P - - - - - L E W E D T Y G I V L L			FasLigand
148	Q L I A D S E T P T I Q K G S Y T F V P W L - - - - L S F K			Neutrokin alpha
142	- - - - - - - - - - G S Y T F V P W L - - - - L S F K			Neutrokin alphaSV

FIGURE 2B

	190	200	210	
114	A N G V E L R D N - Q L V V P S E G L Y L I Y S Q V L F K G			TNFalpha
89	Q D G F S L S N N - S L L V P T S G I Y F V Y S Q V V F S G			TNFbeta
114	T S G T Q F S D A E G L A L P Q D G L Y Y L Y C L V G Y R G			Lfbeta
172	- S G V K Y K K G - G L V I N E T G L Y F V Y S K V Y F R G			FasLigand
174	R G S A L E E K E N K I L V K E T G Y F F I Y G Q V L Y T D			Neutrokin alpha
155	R G S A L E E K E N K I L V K E T G Y F F I Y G Q V L Y T D			Neutrokin alphaSV
	220	230	240	
143	Q G C P - - - - - S T H V L L T H T I S R I A V S Y Q T K			TNFalpha
118	K A Y S P - - K A T S S P L Y L A H E V Q L F S S Q Y P F H			TNFbeta
144	R A P P G G G D P Q G R S V T L R S S L Y R A G G A Y G P G			Lfbeta
200	Q S C N - - - - - N L P L S H K V Y M R N S K Y P Q D			FasLigand
204	K T Y A M G - - - - - H L I Q R K K V H V F G D E L S - -			Neutrokin alpha
185	K T Y A M G - - - - - H L I Q R K K V H V F G D E L S - -			Neutrokin alphaSV
	250	260	270	
167	V N - - L L S A I K S P C Q R E T P E - - G A E A K P W Y E			TNFalpha
146	V P - - L L S S Q K M V Y P - - - - - G L Q E P W L H			TNFbeta
174	T P E L L L E G A E T V T P V L D P A R R Q G Y G P L W Y T			Lfbeta
222	L V - - M M E G K M M S Y C - - - - - T T G Q M W A R			FasLigand
226	L V T L F R C I Q N M P E T L P N - - - - - N			Neutrokin alpha
207	L V T L F R C I Q N M P E T L P N - - - - - N			Neutrokin alphaSV
	280	290	300	
193	P I Y L G G V F Q L E K G D R L S A E I N R P D Y L D F A E			TNFalpha
166	S M Y H G A A F Q L T Q G D Q L S T H T D G I P H L V L S P			TNFbeta
204	S V G F G G L V Q L R R G E R V Y V N I S H P D M V D F A R			Lfbeta
242	S S Y L G A V F N L T S A D H L Y V N V S E L S L V N F E E			FasLigand
244	S C Y S A G I A K L E E G D E L Q L A I P R E N A Q I S L D			Neutrokin alpha
225	S C Y S A G I A K L E E G D E L Q L A I P R E N A Q I S L D			Neutrokin alphaSV
	310			
223	S G Q V Y F G I I A L			TNFalpha
196	S - T V F F G A F A L			TNFbeta
234	- G K T F F G A V M V G			Lfbeta
272	S - Q T F F G L Y K L			FasLigand
274	G D V T F F G A L K L L			Neutrokin alpha
255	G D V T F F G A L K L L			Neutrokin alphaSV

Figure 3
Neutrokin- α



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FIGURE 4 A

1 50
 HSOAD55RA GGNTAACTCT CCTGAGGGGT GAGCCAAGCC CTGCCATGTA
 HNEDU15X ...AAATTCA GGATAACTCT CCTGAGGGGT GAGCCAAGCC CTGCCATGTA
 HSLAH84R .AATTCGGCA NAGNAACTG GTTACTTTTT TATATATGGT CAGGTTTTAT
 HLTBM08R AATTCGGCAC GAGCAAGGCC GGCCTGGAGG AAGCTCCAGC TGTCACCGCG

51 100
 HSOAD55R GTGCACGCAG GACATCANCA A..ACACANN NNNCAGGAAA TAATCCATTCT
 HNEDU15X GTGCACGCAG GACATCAACA A..ACACAGA TAACAGGAAA TGATCCATTCT
 HSLAH84R ATACTGATAA GACCTACGCC ATGGGACATC TAGTTCAGAG GAAGAAGGTC
 HLTBM08R GGACTGAAAA TCTTTGAACC ACCAGCTCCA GGAGAAGGCA ACTCCAGTCA

101 150
 HSOAD55R CCTGTGGTCA CTTATTCTAA AGGCCCCAAC CTTCAAAGTT CAAGTAGTGA
 HNEDU15X CCTGTGGTCA CTTATTCTAA AGGCCCCAAC CTTCAAAGTT CAAGTAGTGA
 HSLAH84R CATGTCTTTG GGGATGAATT GAGTCTGGTG ACTTTGTTTC GATGTATTCA
 HLTBM08R GAACAGCAGA AATAAGCGTG CCGTTCAGGG TCCAGAAGAA ACAGTCACTC

151 200
 HSOAD55R TATGGATGAC TCCACAGAAA GGGAGCAGTC ACGCCTTACT TCTTGCCTTA
 HNEDU15X TATGGATGAC TCCACAGAAA GGGAGCAGTC ACGCCTTACT TCTTGCCTTA
 HSLAH84R AAATATGCCT GAAACACTAC CCAATAATTC CTGCTATTCA GCTGGCATTG
 HLTBM08R AAGACTGCTT GCAACTGNNT GCAGACAGTG AAACACCAAC TATACAAAAA

201 250
 HSOAD55R AGAAAAGAGA AGAAATGAAA CTGNAAGGAG TGTGTTTCCA TCCTCCCACG
 HNEDU15X AGAAAAGAGA AGAAATGAAA CT.GAAGGAG TGTGTTTCCA TCCTCCCACG
 HSLAH84R CAAAAC'TGGN AGGAAGGA...GATGAAC TCCAAC'TGC AATACCAGGG
 HLTBM08R GGCTCCCTTC TGNTGCCACA TTTGGGCCAA GGAATGGAGA GATTCTTCG

251 300
 HSOAD55R GAAGGAAAGC CCCTCTNTCC GATCCTCCAA AGACGGAAAG CTGCTGGCTG
 HNEDU15X GAAGGAAAGC CCCTCTGTCC GATCCTCCAA AGACGGAAAG CTGCTGGCTG
 HSLAH84R GAAAATGCAC AATTATCACT GGGATGGAGA TGTTACATT TTTTGGGTGC
 HLTBM08R TCTGGAAACA TTTTGCCAAA CTCTTCAGAT ACTCTTNCT CTCTGGGAAT

301 350
 HSOAD55R CAACCTTGNT GNTGGCATTG TGTTCTTGCT GNCTCAAGGT GGTGTTNTT.
 HNEDU15X CAACCTTGCT GCTGGCACTG CTGTCTTGCT GCCTCACGGT GGTGTCTTTC
 HSLAH84R CATTGAACT GCTGTGACCT NCTTACANCA NGTGTGTTN GCTATTTTNC
 HLTBM08R CAAAGGAAAA TCTCTACTTA GATTNACACA TTTGTTCCCA TGGGTNTCTT

351 400
 HSOAD55R
 HNEDU15X TACCAGGTGG CCGCCCTGCA AGGGGACCTG GCCAGCTCC GGGCAGAGCT
 HSLAH84R CTNCCTNTTC TNTGGTAACC TCTTAGGAAG GAAGGATTCT TAACTGGGAA
 HLTBM08R AAGTTTTAAA AGGGGAGTGC CCTTAGGAGG AAAAGGGGAT AAATATTGGC

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FIGURE 4C

	801		850
HSOAD55R
HNEDU15X	GTCCATGTCT	TTGGGGATGA	ATTGAGTCTG GTGACTTTGT TTCGATGTAT
HSLAH84R	.....	.....	.....
HLTBM08R	.....	.....	.....
	851		900
HSOAD55R	.....	.....	.....
HNEDU15X	TCAAAATATG	CCTGAAACAC	TACCCAATAA TTCCTGCTAT TCAGCTGGCA
HSLAH84R	.....	.....	.....
HLTBM08R	.....	.....	.....
	901		950
HSOAD55R	.....	.....	.....
HNEDU15X	TTGCAAAACT	GGAAGAAGGA	GATGAACTCC AACTTGCAAT ACCAAGAGAA
HSLAH84R	.....	.....	.....
HLTBM08R	.....	.....	.....
	951		1000
HSOAD55R	.....	.....	.....
HNEDU15X	AATGCACAAA	TATCACTGGA	TGGAGATGTC ACATTTTTTG GTGCATTGAA
HSLAH84R	.....	.....	.....
HLTBM08R	.....	.....	.....
	1001		1050
HSOAD55R	.....	.....	.....
HNEDU15X	ACTGCTGTGA	CCTACTTACA	CCATGTCTGT AGCTATTTTC CTCCCTTTCT
HSLAH84R	.....	.....	.....
HLTBM08R	.....	.....	.....
	1051		1100
HSOAD55R	.....	.....	.....
HNEDU15X	CTGTACCTCT	AAGAAGAAAG	AATCTAACTG AAAATACCAA AAAAAAAAAA
HSLAH84R
HLTBM08R
	1101		
HSOAD55R		
HNEDU15X	AAAAAA		
HSLAH84R		
HLTBM08R		

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Figure 5A
Neutrokine- α SV

1	ATGGATGACTCCACAGAAAGGGAGCAGTCACGCCTTACTTCTTGCCTTAAGAAAAGAGAA	60
1	M D D S T E R E Q S R L T S C L K K R E	20
61	GAAATGAAACTGAAGGAGTGTGTTTCCATCCTCCACGGAAGGAAAGCCCCTCTGTCCGA	120
21	E M K L K E C V S I <u>L P R K E S P S V R</u>	40
	CD-I	
121	TCCTCCAAAGACGGAAAGCTGCTGGCTGCAACCTTGCTGCTGGCACTGCTGTCTTGCTGC	180
41	<u>S S K D G K L L A A T L L L A L L S C C</u>	60
	CD-I	
181	CTCAGCGTGGTGTCTTTCTACCAGGTGGCCGCTGCAAGGGGACCTGGCCAGCCTCCGG	240
61	<u>L T V V S F Y Q V A A L</u> <u>Q G D L A S L R</u>	80
	CD-II	
241	GCAGAGCTGCAGGGCCACCACGCGGAGAAGCTGCCAGCAGGAGCAGGAGCCCCAAGGCC	300
81	<u>A E L Q G H H A E K L P A G A G A P K A</u>	100
	CD-II	
	CD-III	
301	GGCCTGGAGGAAGCTCCAGCTGTCAACGCGGACTGAAAATCTTTGAACCACAGCTCCA	360
101	<u>G L E E A P A V T A G L K I F E P P A P</u>	120
	CD-III	
	#	
361	GGAGAAGGCAACTCCAGTCAGAACAGCAGAAATAAGCGTGCCGTTTCAGGTCCAGAAGAA	420
121	G E G N S S Q N S R N K R A V Q G P E E	140
421	ACAGGATCTTACACATTTGTTCCATGGCTTCTCAGCTTTAAAAGGGGAAGTGCCCTAGAA	480
141	T G S Y T F <u>V P W L L S F K R G S A L E</u>	160
	CD-IV	
481	GAAAAAGAGAATAAAATATTGGTCAAAGAAACTGGTTACTTTTTTATATATGGTCAGGTT	540
161	<u>E K E N K I L V K E T G Y F F I Y G Q V</u>	180
	CD-IV	
	CD-V	
541	TTATATACTGATAAGACCTACGCCATGGGACATCTAATTCAGAGGAAGAAGGTCCATGTC	600
181	<u>L Y T D K T Y A M G H L I Q R K K V H V</u>	200
	CD-VI	
	CD-VII	
601	TTTGGGGATGAATTGAGTCTGGTGACTTTGTTTCGATGTATTCAAATATGCCTGAAACA	660
201	<u>F G D E L S L V T L F R C I O N M P E T</u>	220
	CD-VIII	
	CD-VIII	
661	CTACCCAATAATTCCTGCTATTTCAGCTGGCATTGCAAACTGGAAGAAGGAGATGAACCTC	720
221	<u>L P N N S C Y S A G I A K L E E G D E L</u>	240
	CD-IX	
	CD-X	
721	CAACTTGCAATACCAAGAGAAAATGCACAAATATCACTGGATGGAGATGTCACATTTTTT	780
241	<u>Q L A I P R E N A Q I S L D G D V T F F</u>	260
	CD-X	
	CD-XI	
781	GGTGCATTGAAACTGCTGTGACCTACTTACACCATGTCTGTAGCTATTTTCTCCCTTTC	840
261	<u>G A L K L L</u>	266
	CD-XI	

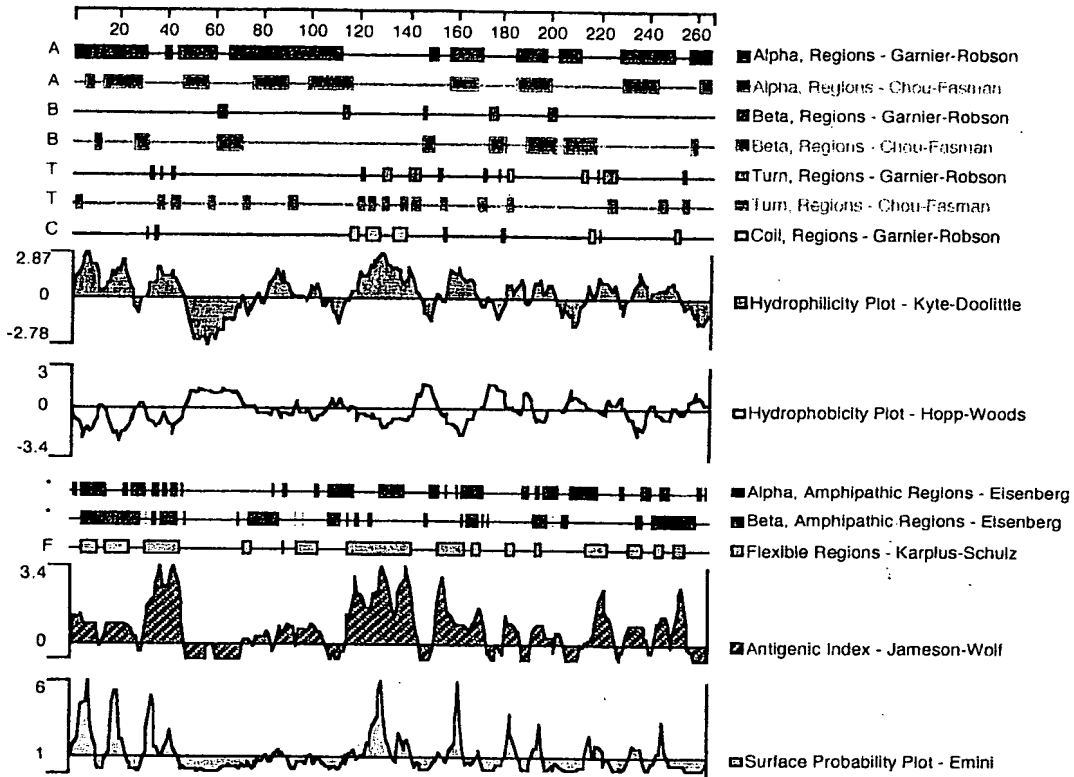
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Figure 5B
Neutrokine- α SV

841 TCTGTACCTCTAAGAAGAAAGAATCTAACTGAAAATACCAAAAAAAAAAAAAAAAAAAAA 900
901 AAA 903

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Figure 6
Neutrokin- α SV



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Figure 7

a.

leutokine-

alpha M DDSTEREQSRLLTSCCLKREEMKLKECVSILPRKESPSVRS 41

Transmembrane Region

SKD G K L L A A T L L L A L L S C C L T V V S F Y Q V A A L Q G D L A S L R A E 82

L Q G H H A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P P A P G E G 123

NSSQNSRNKRAVQGP EETVT QDCDQ L I A D S E R P T I Q K G S Y D 164
 April HS V T H L V P I N A T S K - D D S D V 134
 TNF K P V A H V V A N P Q A E G Q - - - - - 102
 LT α K P A A H L G D P S K Q N S - - - - - 77

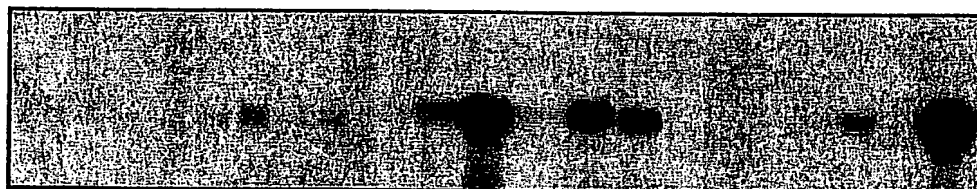
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 E V M W Q P A - - - - R R G R G I Q A Q G Y G V R I Q D A G V L L Y S G V L 170
 - L Q W L N R R A N A L A N G V E R D - - N Q I V V P S E G L M L L S O V L 139
 - L L W R A N T D R A F Q D G F S E S N - - N S E L A V E T S G I V F V Y S O V V 114

Y T D K E V - - - - A M G H L I O R K K V H V E G D E L S L V T T E F R C T O N M P 237
 E Q D V T F - - - - M C O V V S R E - - - - G Q G R Q E T T F R C T R S M P 201
 E K G Q G C P - - - - S T H V L T T H T I S R I A V S M Q T K V N L L S A I K S P 176
 S G E A V S P K A S S S P Y L A H E V Q L H S S E P F H V P L L S S Q R M V 155

E - - T L P - - - - - N N E C Y S A G I A K I E E G D E T Q L A T P R E N A 268
 S H P D R A - - - - - V N S C Y S A G V F H H Q G D I T S V I T P R A R A 234
 C Q R E T E E G A E A K P W E P I N L G G V F O L E K G D R E S A E T N R P D Y 217
 Y P - - - - - G L Q E E W L H S M H G A A F O L T O G D Q L E T H T D G I P H 190

Q I S E D G D V E F F C A L K L L 285
 K L N E S H G E L G F V K E 250
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b.



- 4.4 kb

- 2.4 kb

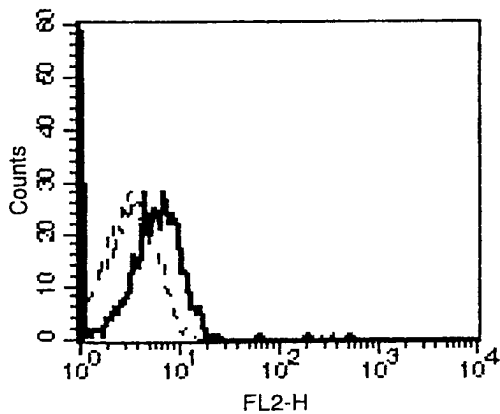
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 HeLa
 K-562
 MOLT-4
 Raji
 SW480
 Spleen
 Lymph Node
 Thymus
 PBL
 Bone Marrow
 Fetal liver
 Heart
 Brain
 Placenta
 Lung
 Liver
 S. Muscle
 Kidney
 Pancreas

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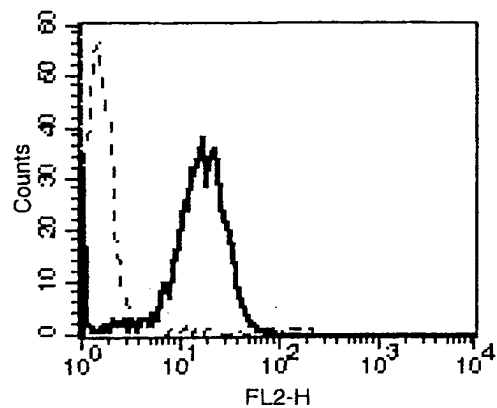
Figure 8

a.

Medium only



IFN γ (100 U/mL)



b.

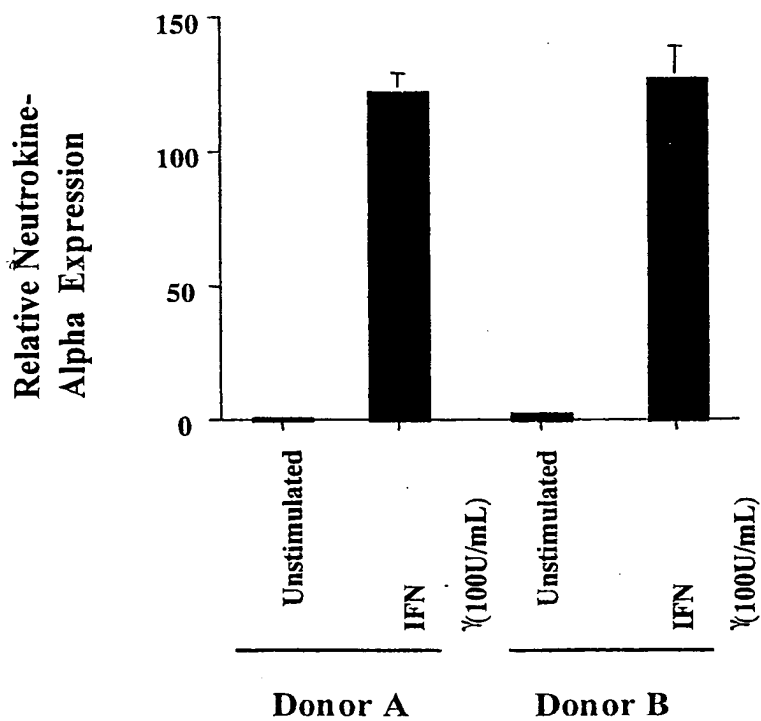
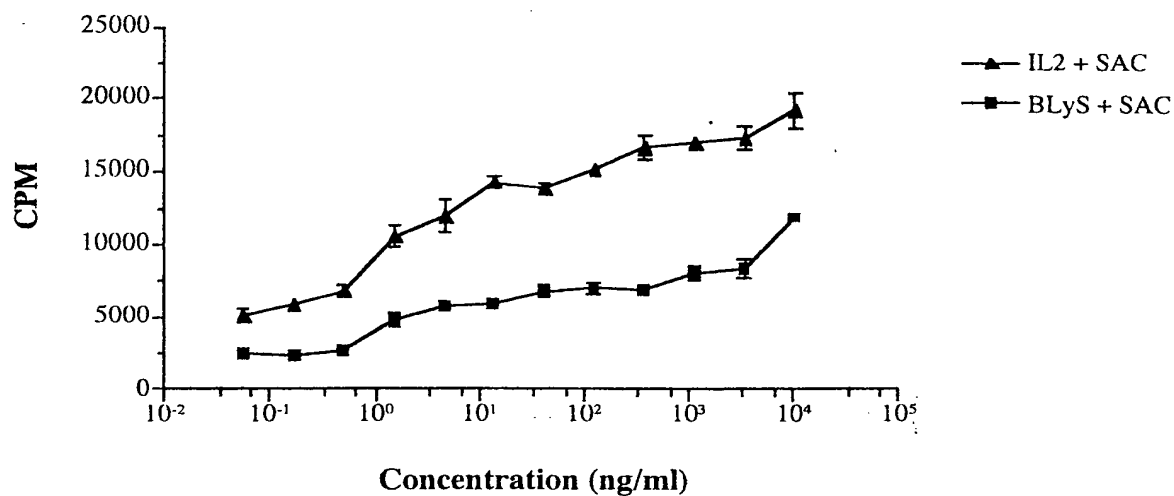


Figure 9

a.



b.

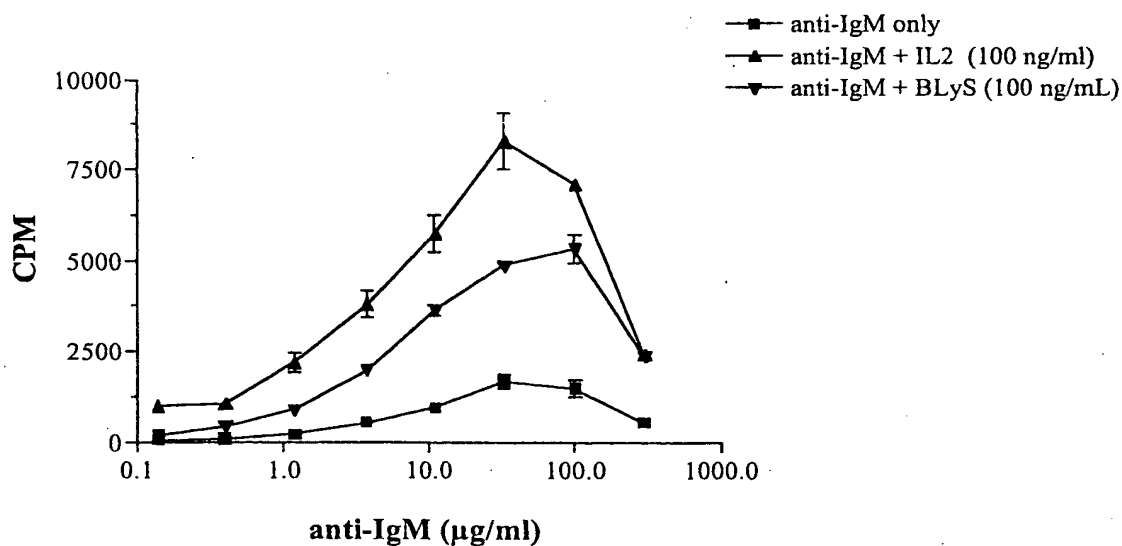
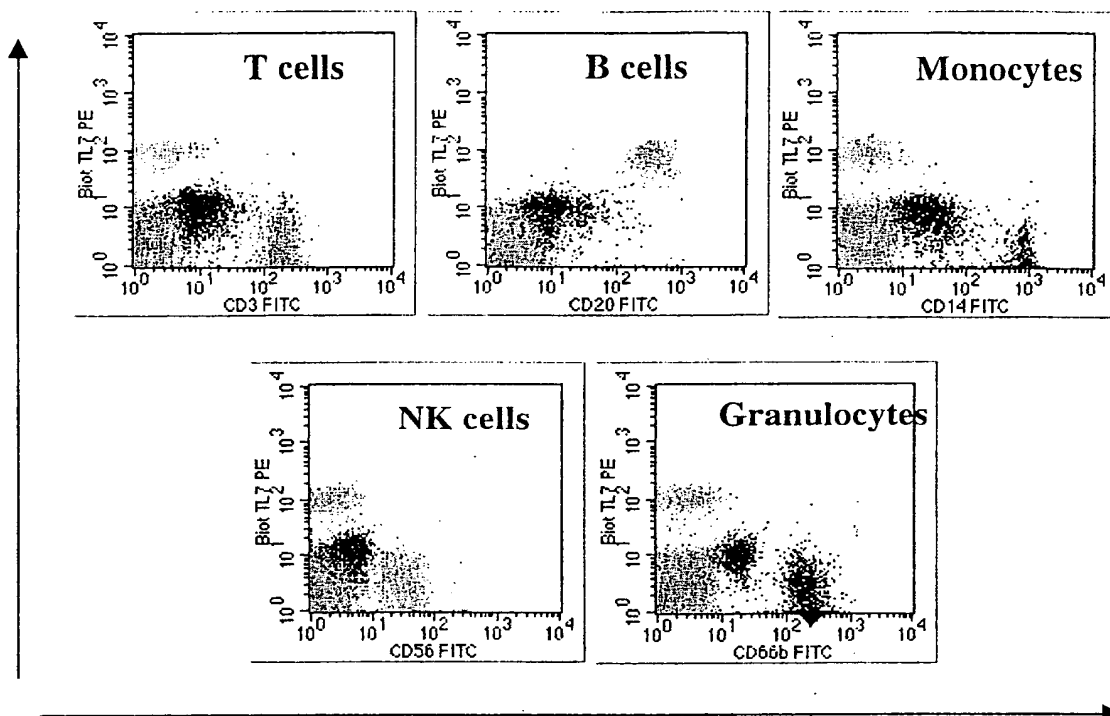


Figure 10

a.

Biotinylated Neutrophil-
alpha binding



Hematopoietic lineage markers

b.

U-937

IM-9

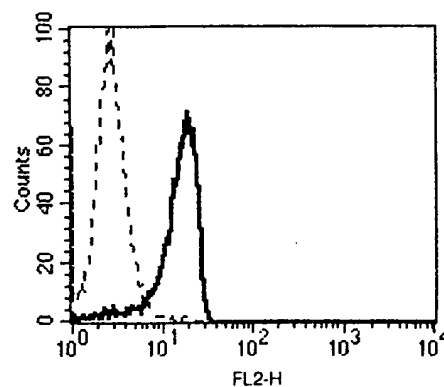
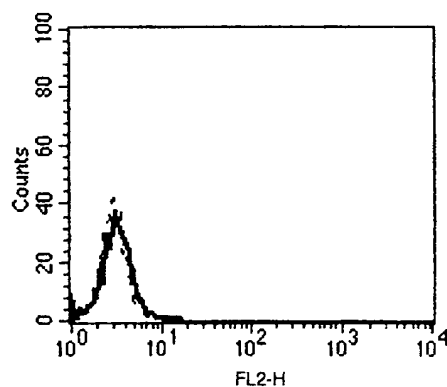


Figure 11

